

What is claimed is:

1. A motor comprising:

- 5 concentrically;
- (a) a cylindrical frame made of ferromagnetic material;
- (b) a pipe fitted in and disposed within said frame
- (c) a sintered bearing press-fitted into said pipe;
- (d) a cylindrical magnet fixed on an outer wall of said pipe at
- an inner wall of said magnet; and
- (e) a cylindrical coil facing said magnet via an annular space,
- 10 wherein said frame and said pipe are welded at a fitted section
- therebetween.

2. The motor of claim 1, wherein the welding is one of resistance welding and laser welding.

3. The motor of claim 1, wherein the fitted section has a fit-in margin ranging from not less than $0\ \mu\text{m}$ to less than $20\ \mu\text{m}$.

4. The motor of claim 1, wherein said motor is a vibration motor.

5. A motor comprising:

- 20 concentrically;
- (a) a cylindrical frame made of ferromagnetic material;
- (b) a sintered bearing fitted in and disposed within said frame
- (c) a cylindrical magnet fixed on an outer wall of said sintered
- 25 bearing at an inner wall of said magnet; and
- (d) a cylindrical coil facing said magnet via an annular space,

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9. An apparatus comprising:

(b) a motor disposed in said housing, said motor including:

(b-1) a cylindrical frame made of ferromagnetic material;

concentrically;

(b-4) a cylindrical magnet fixed on an outer wall of said

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space,

therebetween, and

(c) a mechanism for powering said motor.

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resistance welding and laser welding.

11. The apparatus of claim 9, wherein the fitted section has a fit-in margin ranging from not less than $0\ \mu\text{m}$ to less than $20\ \mu\text{m}$.

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12. The apparatus of claim 9, wherein said motor is a vibration motor.

13. An apparatus comprising:

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(a) a housing;

(b) a motor disposed in said housing, said motor including:

(b-1) a cylindrical frame made of ferromagnetic material;

(b-2) a sintered bearing fitted in and disposed within said frame concentrically;

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(b-3) a cylindrical magnet fixed on an outer wall of said sintered bearing at an inner wall of said magnet; and

(b-4) a cylindrical coil facing said magnet via an annular space,

wherein said frame and said sintered bearing are welded at a fitted section therebetween, and

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(c) a mechanism for powering said motor.

14. The apparatus of claim 13, wherein the welding is one of resistance welding and laser welding.

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15. The apparatus of claim 13, wherein the fitted section has a fit-in margin ranging from not less than $0\ \mu\text{m}$ to less than $20\ \mu\text{m}$.

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16. The apparatus of claim 13, wherein said motor is a vibration motor.

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